Pressure Controls EXPRESS

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Industrial Controls Division • High Purity Controls Division
Electronic Controls Division • Tescom Europe • Hankuk Tescom

May 2002

Application Story

54-2300 Instability Eliminated By Working With The Customer

By Cindy Nelson Konen, Project Engineer, Industrial Controls Division

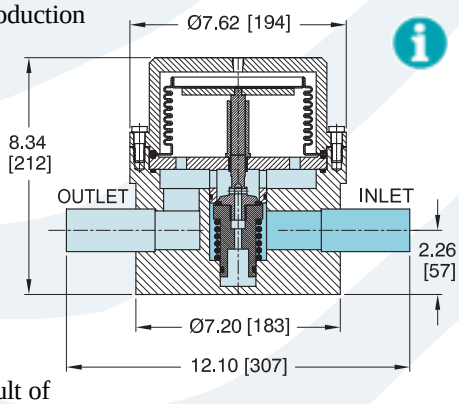
A customer recently called with an instability problem while using a 54-2300 back pressure regulator. The regulator was being used to control line pressure in a system used to test poppet valves, *see Figure 1 (pg.2)*. The fluid, hydraulic oil, was pumped at a flow of 11 gallons/minute using a gear pump. The instability that the customer was experiencing only occurred during certain pressure conditions. Initially the customer blamed Tescom's 54-2300 and asked if these regulators were known for being unstable. As with most mechanical devices there are a number of conditions that will cause them to go unstable.

Our goal with this customer was to find those conditions that would eliminate the instability and still provide him with a workable solution. To start, the customer was asked to separate the outlet of the test article and that of the 54-2300 and to add a back pressure loop to the exhaust of the 54-2300, *see Figure 2 (pg.2)*. Usually this will eliminate instability in the system, but this time the instability was still present. Next, the customer was asked to remove the test article and to replace it with a metering valve. The metering valve was adjusted to simulate the same back pressure created by the test article. In this configuration the system was stable. This showed that the test article was interacting with the 54-2300 and causing it to go unstable. As a result, the customer was starting to see that the regulator was not the cause of the instability. *continued on page 2*

Product Highlight

15 Series Regulator Goes High Performance

By Bruce LeGare, Marketing Manager, High Purity Controls Division



The 15 Series regulator is now in its third year of production and has quickly become a dominant product in the world of bulk gas high purity regulators, frequently replacing the regulators from Kaye and MacDonald, Fisher, and Cashco.

The 15 Series was originally designed for high purity bulk gas filtration skids providing up to 400 scfm of flow. Customer requirements during development required that the unit incorporate a metal diaphragm for a sensing element. Due to the thickness requirement of the metal diaphragm used in this regulator, a large spring force is required to move the main valve through its very limited stroke. The net result of this type of design is an ultra high purity regulator that has a much smaller flow capacity and higher droop performance than a typical industrial-type regulator package of this size. Even *continued on page 2*

Inside

2 **Application Story**
54-2300 Instability Eliminated, continued
Product Highlight
15 Series, High Performance, continued
Literature
ER1200 & Focus Manuals
Tradeshows

3 **Product Highlight**
New 35 Magnum Series
Tescom Update
MIS Focus
Announcements
Certificate of Recognition
New Employee!
New Baby!
Great Quotes

4 **Announcements**
May Birthdays
Activities Committee
Flying Alone
Tips For Your Child's Journey

5 **Retirement Luncheon**
Ralph Yost's Retirement Memories

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Application Story

54-2300 Instability Is Eliminated *continued*

Next, the customer tried to place an accumulator in front of the the test article to buffer the communication between the two devices. This did not work. We then decided to use a different load spring in the 54-2300. For this application, the customer had chosen to use a lighter rate spring because his system was operating at the lower end of the pressure range of the spring. We knew that a different spring would not eliminate the instability. However, we felt that by changing the spring we could move the instability to a different pressure range and hopefully outside of the customer's operating range. The customer tried this and was pleased to report that his system was now stable.

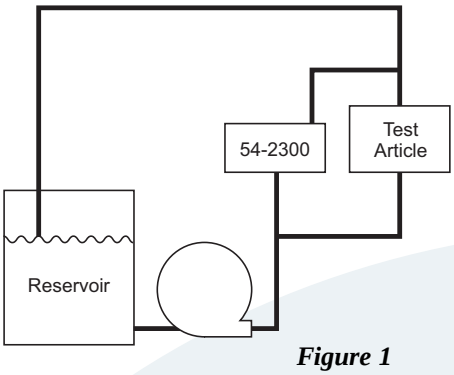

Figure 1

back to page 1

This is just one of many examples where customer support from the factory has turned a dissatisfied customer into a satisfied customer. We need our customers to recognize that Tescom not only offers pressure control products, but also pressure control solutions. If you are working with a customer who is having problems with a Tescom product, we ask that you utilize the resources available at the factory. We have over 100 years combined experience in both gas and liquid services. For application support, call 800-447-1250 (ICD) and ask to speak with an Applications Engineer.

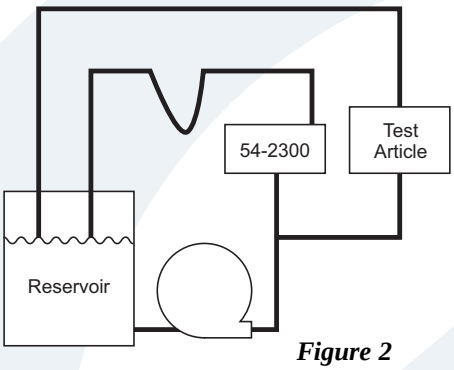

Figure 2

Product Highlight

15 Series, High Performance *continued*

though this design has proven to work well in filter skids and has met all of the semiconductor specifications, it has always been felt that this regulator had the potential for higher performance.

Recent applications in the BioPharm and Fiber Optics markets with less stringent design requirements have allowed us to think outside the box on how we can convert this Toyota Camry into a Corvette with minimal effort. After a few Skunkworks ("behind the scenes") meetings at HPCD, we decided that using a SST (stainless steel) bellows as a sensing element might just be the engine change that could make this product into the race car we believed it could be. As luck would have it, the FR-1000 has a SST bellows that was able to fit right into the 15 series for a test drive.

The performance enhancements created by this change were astounding. The C_V rating with this change went from C_V=8.0 to C_V=20 while the flow rating increased from 400 scfm to over 1500 scfm. The introduction of the SST bellows in this design gives this regulator a whole new performance envelope. The SST bellows provides a flexible, constant-area sensing element that allows us to stroke the large main valve in this regulator into its high performance range. This change, in conjunction with this product's bubble tight class 6 valve shut-off is opening new markets where class 4 shut-off products from Jordan and Cashco have been typically used.

With the SST bellows option now fully incorporated into the 15 Series product offering, this product is ready to meet all of your high flow requirements no matter what market your application is in.

Literature

HOT OFF THE PRESS:

Electronic Controls Division

- ER1200 Operations & Service Manual - #1925 ***NEW!***

High Purity Controls Division

- Focus Operations & User Manual - #1924 ***NEW!***

Updated Literature Request Form!

- Literature Request - #1488 *(revision)*

Available to download on Tescom's ***Distributor Zone*** *under the General section!*

Tradeshows

Offshore Technology Conference (OTC)
May 6 - 9, 2002
Reliance Center at Reliant Park
Houston, Texas USA
Booth 2207

SEMICON West
July 22 - 24, 2002
Moscone Center
San Francisco, California USA
Booth 2508

Holiday SCHEDULE

Tescom USA
is closed on:
May 27, 2002, *Memorial Day*

Tescom Europe
is closed on:
May 1, 2002, *Labour Day*
May 9-10, 2002, *Ascension Day*
May 20, 2002, *Pentecost Monday*

Hankuk Tescom
is closed on:
June 6, 2002, *Memorial Day*

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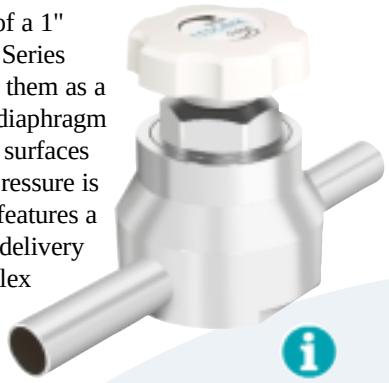
May 2002 3

Product Highlight

NEW! 35 Magnum Series 1" Ultra-High Purity Valve



The High Purity Controls Division announces the addition of a 1" bulk gas valve to their successful Magnum valve line. The 35 Series significantly expands Tescom's product offering and positions them as a single source valve supplier. Features include, metal to metal diaphragm to body seal, tied diaphragm design, 10 R_a microinch internal surfaces and Tescom's PureWeld™ construction. Maximum operating pressure is 250 PSIG. The 35 Series is manufactured from bar stock and features a flow capacity of C_V=11. This new valve is ideal for bulk gas delivery systems and filtration skids and it comes in both line and uniplex porting configurations.

For further information on this new valve please contact HPCD Customer Services or your Regional Manager.

Tescom Update

MIS FOCUS Management Information Systems

Policy #109, Internet Usage Guideline

POLICY: The value and importance of the Internet resources are very apparent to increasing numbers of employees who now have Internet access from their desktop computers. At the same time, we must be mindful of the responsibility and accountability associated with using these resources. One such responsibility is knowing potential problems that can occur when downloading files from the Internet. Before attempting to use software retrieved from the Internet, a virus scan program must be run to make sure it is clean and virus free. Consult a representative from MIS for information and guidance.

GUIDELINES: All of us have an obligation to use the Internet in a responsible and professional manner, just as is the case for our other company resources, such as telephones and computers. Searching the vast information resources of the Internet can be fascinating, but it can also be misused. Tescom employees must be mindful of the following guidelines while 'surfing the net:'

- Business use of the Internet must always be consistent with the Purpose of Tescom Corporation and the work assignment.
- Personal use of the Internet must take place during non-work time, be of reasonable duration and frequency, and must not interfere with or adversely affect the employee's performance of other organization requirements.
- Materials and supplies (printer paper, floppy disks, etc.), expended in connection with personal use of the Internet must be purchased by the employee and such use must not reduce the useful life expectancy of computer equipment or any other corporate assets.
- Personal use must not be in conjunction with any personal business activity, the business of any other corporation or firm, consulting effort or similar profit or non-profit venture.
- Use of the Internet must be in compliance with all applicable laws, regulations, policies and procedures.
- The Internet must not be used for any illegal purpose or in a way which would cause embarrassment to the Company or otherwise be adverse to its interests, nor may such use compromise security or the integrity of the Corporation's information or proprietary rights.
- The Internet will not be used to send, post, or download information that contains obscene language or images.
- Internet usage from your desktop computer can and will be monitored by MIS.

Announcements

Certificate of Recognition

Congratulations

to the following Tescom Employees for their dedication and years of service!

Years of Service

Charles Lofgren . . . **20**
Dennis Post **15**
Pete Theirl **5**
Peter Hill **5**

Welcome Aboard!

Please welcome **TOM LOGAN** to Tescom as our new *Engineering Manager* for the Industrial Controls Division. Tom comes to Tescom after working for Dana Corporation in Plymouth, Minnesota and Indiana.

NEW BABY!

Congratulations to **Don** and **Alyca Judge** on the birth of their new daughter, **Tessa Ann**. Tessa was born April 25th, weighing 7 lbs. 11 oz. Don is a *Machinist* for Tescom's High Purity Controls Division.

Great Quotes and Stories

Laughter

During the Civil War, Abraham Lincoln was criticized for his humor. To which he replied "With the fearful strain that is on me, if I did not laugh I would die."

Humor

Sign in a gas station:

Labor: $10 per hour
If you watch: $12 per hour
If you help: $15 per hour
If you worked on it first, then brought it in: $27.50 per hour

Paul Harvey

1001 Great Stories & Quotes
R. Kent Hughes

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May 2002 4

Flying Alone

Tips To Make Your Child's Journey Safe, Comfortable & Fun

Travel Policies for Children

- When you make a flight reservation for your child, ask about the airline's travel guidelines for children.

Making Reservations

- When making reservations, tell the travel agent that your child will be traveling alone and provide the child's age.
- Make the child's reservation on a nonstop flight or other flight that does not require a change of planes.

Tickets

- Be sure to send a copy of the flight information to the person who will be meeting your child at his/her destination.
- Some airlines require proof of age, so bring your child's birth certificate or other identification with you to the airport.
- Show your child the ticket, how to read it and where to keep it in a safe place. Explain that he/she needs to keep the ticket for the return flight and/or as a receipt for claimed baggage.

Preparing for Travel

- Tell your child to NEVER LEAVE THE AIRPORT ALONE OR WITH A STRANGER. If the child needs assistance, he/she should be instructed to go ONLY to uniformed airline staff or airport police. Teach your child that in case of an emergency, he/she should not wait in line but ask for help immediately.
- Your child should carry identification and a small amount of cash for emergencies. Give your child a calling card and teach him/her how to use it and how to make a collect call. Provide your child with information about how to contact you, the adult meeting him or her, or another responsible adult.
- Make sure that all suitcases and carry-on luggage include both your name and your child's name, addresses and phone numbers. When checking luggage, show your child how the luggage claim tickets match the tags on the luggage and that the final destination is on these tags.
- Identify your child to the check-in agent as an unaccompanied minor. Make sure to provide the name and telephone numbers for yourself and for the person who will be meeting your child at his/her destination. Arrangements should be made to release your child only to that designated person.

Boarding

- After check-in, stay with the child until boarding and remain in the departure gate area until the flight has departed. Many airlines provide an escort to accompany your child onto the aircraft and identify your child to the flight attendant.

Arrival

- Explain to your child that he/she should request the assistance of a flight attendant before leaving the plane at the destination city.
- Remind your child to check to see that all personal items have been gathered before leaving the plane. The loss of any item should be reported to a flight attendant.
- Many airlines will arrange an escort for unaccompanied children at the arrival site; the escort is responsible for releasing your child only to the person designated by you. Whoever is picking up your child usually will be required to show photo identification.

Greater Twin Cities United Way

Announcements

May Birthdays!

TESCOM USA

Happy Birthday!

Bruce McTavish 2
Chad Kirchner. 3
Donald Rassier. 6
Paul Street. . . . . `11
Ingrid Johnson 12
Daniel Hobgood 13
Cindy Nelson Konen 14
Craig Zimmer 15
Pam Riley. 16
Sarah Judd. 19
Fredrick Streif 21
Susan Owens 27
Sheree Lucas 27
Charles Sievert. 28
Todd Larsen 28
Deanna Wirtz 31

TESCOM EUROPE

Glückwünsche zum Geburtstag!

Christian Baseler 21
Mathieu Vogt. 22
Karita Gooßen 24
Andrea Nilson. 29

ACTIVITIES COMMITTEE

Just a reminder, the **Silent Auction** is **May 13th through May 15th!** Please bring any donations to any Activities Committee member. If you have any suggestions or ideas for the Activities Committee, please contact me or one of the members listed below.

Thank you,
Carol Zimmer

Activities Committee Members

ICD	HPCD
Carol Zimmer	Robyn Stewart
Betty Janson	John Bistodeau
Pam Riley	Jeff Cessna
John Huber	Becky Withrow
Craig Zimmer	

Ralph Yost's Retirement Memories

Retirement Luncheon Held At Tescom - April 5th, 2002

After more than 36 years of service at Tescom, Ralph Yost has retired. A luncheon was held in his honor on April 5th at Tescom's ICD/ECD location, Elk River, Minnesota. The event was filled with great food and humorous presentations. Ralph has been with Tescom for so long and will be so missed, that he has decided to come back part-time to offer his expertise. That way he can keep us up-to-date on how his retirement is going. Happy Retirement Ralph!

Carol and Craig Zimmer present a unique gift to Ralph.

Thank you to all who worked so hard in making great presentations, delicious dishes and setting up the event.

Don Glesmann, CEO, talking to Ralph.

When Ralph speaks, people listen.

Ed Cunnington, COO, saying a few words in honor of Ralph.

Brian Caldwell, Candy Petron, Jody Kurowski, and Tammy Jenson, conducting a great presentation.

Ralph showing off his retirement gift, an underwater video camera for looking at fish. Seeing the little fish on the old depth finder just isn't good enough anymore!

Candy Petron presents unique and hilarious retirement gifts.

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		HPCD Price List
		ICD Master Catalog CD
	ea.	ICD Customer Catalog (1 1/2" binder – blue)*
		Pharmaceutical/Biotech brochure (Form #1926)
		Pressure Controls for Industry brochure (Form #1753)
		ICD Price List
		Sampling System (Petrochem/Analyzer) brochure (Form #1778)
		ECD Literature packet (includes catalog pages & color sell sheets)
		HPCD Global Solutions in Pressure Control CD
		ICD/ECD Global Solutions in Pressure Control CD
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